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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,106	02/11/2004	Eric Bornstein	BORNE40593	2676
<div>7590 11/02/2007</div> <div>Simona A Levi-Minzi PhD McDermott Will &amp; Emery LLP Suite 2200 201 South Biscayne Boulevard Miami, FL 33131</div>				
			EXAMINER SHAY, DAVID M	
			ART UNIT 3735	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/776,106	Applicant(s) BORNSTEIN, ERIC	
	Examiner david shay	Art Unit 3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on August 3, 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 34-42 is/are pending in the application.
- 4a) Of the above claim(s) 21-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 34-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>March 16, 2007</u> . | 6) <input type="checkbox"/> Other: _____  |

The examiner has reviewed the Requirement for Election and Restriction set forth in the office action mailed May 16, 2007. It has been determined that while the requirement for election is warranted, the restriction does not define embodiments which are patentably distinct. As such, all apparatus claims will be examined herein and all method claims stand withdrawn.

Claims 21-33 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on May 16, 2007.

The requirement is deemed proper and is therefore made FINAL.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “stocking having an optical ingress”; “bacterial density below tissue coagulation density”; “the selective emission under control of said first radiation”; “the selective emission under control of said second radiation”; “the control configured and arranged to adjust the power density”; “the control configured and arranged to adjust the power density by adjusting the spot size”; “the control configured and arranged to adjust the power density by scanning a beam spot”; and “power densities that will selectively excite the biomolecule electrons of chromophores” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure

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must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1- and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed disclosure is silent on "a stocking having an optical ingress"; "bacterial density below tissue coagulation density"; "the control configured and arranged to adjust the power density"; and "power densities that will selectively excite the biomolecule electrons of chromophores" and on the manner in which "the selective emission under control of said first radiation"; "the selective emission under control of said second radiation" occurs; and on the manner in which "the control configured and arranged to adjust the power density"; "the control configured and arranged to adjust the power density by adjusting the spot size"; "the

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control configured and arranged to adjust the power density by scanning a beam spot"; and "the transmission is configured and arranged for..." is implemented.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 and 34-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 11, the exact meaning of "the selective emission under control of said first radiation" is unclear. In claims 2 and 4 and claims 12 and 14, it is unclear what the difference in scope of these claims is, specifically, multiplexing is discussed in the originally filed disclosure in the brief descriptions of Figures 3a and 3b as frequency domain multiplexing, which multiplexing occurs when simultaneous transmission is used. In claims 9 and 19, exactly what constitutes a "stocking" is unclear. For the purpose of examination, "stocking" will be construed to indicate any structure which surrounds, controls, or guides that laser beam path. Claims 10 and 20 are indefinite as it appears to fail to further limit the claims from which they depend, as exactly what structure is to be excluded by requiring a handle is unclear, and since without an optical egress, the delivery of the radiations cannot proceed, and therefore what further limitation is intended to be implied is unclear. In claim 34, is indefinite as the exact meaning of the term "without detrimental heat deposition or irreversible harm" is unclear no metes and bounds of this term are set forth in the originally filed disclosure, further the exact meaning of the term "the power density for absorption as non-ionizing without detrimental heat deposition or irreversible harm to the biological system" is unclear. Claim 38 is indefinite as it

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fails to further limit the claim from which it depends, as the generation of singlet oxygen is attributed to all wavelengths claimed in the independent claim, and therefore what further limitation is intended to be implied is unclear. In claim 39 is unclear, since exactly how “the transmission is configured and arranged for bacterial destruction with minimal heat deposition in the infected site...” is effected. In claim 40 is unclear, since exactly how “the transmission is configured and arranged for bacterial destruction based on Power Density of the incident beam...” is effected. In claim 41 is unclear, since exactly how “the transmission is configured and arranged for bacterial destruction based on Power Density of the incident beam ...” is effected. In claim 42 is unclear, since exactly how “the transmission is configured and arranged for bacterial destruction at power densities that will selectively excite with the biomolecule electrons of the chromophores...” is effected. Specifically, with respect to claims 39-42, it is unclear how the “transmission” of the beam will be “configured and arranged” to effect the intended use recited thereafter. Additionally, with respect to claim 42, the terms “the biomolecule electrons” and “the chromophore” lack positive antecedent basis.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9-11, 19, 20, 34, and 38-42 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Parker et al.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 9-14, 19, 20, and 34-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Esperance, Jr. in combination with Neuman et al. L'Esperance, Jr. teaches a device for sterilizing a site wherein two laser beams are projected onto the area to be sterilized. Neuman et al teach that bacteria are destroyed by wavelengths at 830 nm and 970 nm. It would have been obvious to the artisan or ordinary skill to employ lasers producing the wavelengths of Neuman et al in the device of L'Esperance, Jr., since these wavelengths are effective for killing bacteria, as taught by Neuman et al, thus producing a device such as claimed.

Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Esperance, Jr. in combination with Neuman et al as applied to claims 1-4, 9-14, 19, 20, and 34-42, and further in combination with Harris. Harris teaches a device for sterilizing a site including a scaler. It would have been obvious to the artisan or ordinary skill to employ the laser device of the combined teachings of Neuman et al and L'Esperance, Jr. in the device of Harris, since these wavelengths are effective for killing bacteria, as taught by Neuman et al and the combination of multiple wavelengths provides improved results, as taught by nL'Esperance, Jr., or, alternatively, to include the scaler of Harris in the combined device of L'Esperance, Jr. and Neuman et al, since L'Esperance does not limit the application of the device to any particular tissue, thus producing a device such as claimed.

Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Esperance, Jr. in combination with Neuman et al and Harris as applied to claims 5 and 15, and further in combination with Pathak et al. Pathak et al teach that providing a forsted fiber end

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allows radial distribution of the radiation. It would have been obvious to the artisan or ordinary skill to employ the frosted fiber end of Pathak et al device of the combined teachings of Neuman et al, Harris, and L'Esperance, Jr., since this would distribute the radiation radially, enabling the sterilization of the length of the gingival pocket all at once, thus yielding a quicker procedure, thus producing a device such as claimed.

Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Esperance, Jr. in combination with Neuman et al as applied to claims 1-4, 9-14, 19, 20, and 34-42, and further in combination with Schechter et al. Schechter et al teach the use of a laser otoscope to perform surgery. It would have been obvious to the artisan or ordinary skill to employ the combined device of Neuman et al and L'Esperance, Jr. in the device of Schechter et al, since the device is intended to be used to disinfect the tissue surface before surgery, as taught by L'Esperance, Jr., thus producing a device such as claimed.

Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over L'Esperance, Jr. in combination with Neuman et al as applied to claims 1-4, 9-14, 19, 20, and 34-42, and further in combination with Prescott. Prescott teaches the application of therapeutic light to toe ulcers of diabetics. It would have been obvious to the artisan or ordinary skill to employ the combined device of Neuman et al and L'Esperance, Jr. in the device of Prescott, since this would also prevent the ulcers from getting infected, which is desirable, and to use a digit clip to retain the light emitters, since this is not critical; is well within the skill of one having ordinary skill in the art; provides no unexpected result; and would allow the light to be applied to the toe without requiring shoes or socks to be worn, thus producing a device such as claimed.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to david shay whose telephone number is (571) 272-4773. The examiner can normally be reached on Tuesday through Friday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II, can be reached on Monday, Tuesday, Wednesday, Thursday, and Friday. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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